



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,862	08/31/2000	Donald C. D. Chang	PD-200084	3780

20991 7590 12/13/2002

HUGHES ELECTRONICS CORPORATION  
PATENT DOCKET ADMINISTRATION  
BLDG 001 M/S A109  
P O BOX 956  
EL SEGUNDO, CA 902450956

EXAMINER

EWART, JAMES D

ART UNIT PAPER NUMBER

2684

DATE MAILED: 12/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/652,862

Applicant(s)

CHANG ET AL.

Examiner

James D Ewart

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Application/Control Number: 09/652,862

Art Unit: 2684

***IDS***

1. Examiner did not receive IDS #5 and therefore was unable to review the documents of applicant to be recorded. Please resubmit IDS #5 and if possible the post mark of IDS #5.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Moon. (U.S. Patent No. 6,173,352).

Referring to claim 1, Chang et al teaches a method for rapid acquisition of a specific subscriber comprising the following steps: (a) defining a coverage area as an arrangement of a plurality of cells wherein one of the plurality of cells includes a specific subscriber (column 2, Lines 20 – 23 and Figure 19); (b) defining a partition of cell clusters wherein one of the cell

Application/Control Number: 09/652,862

Art Unit: 2684

clusters includes the one of the plurality of cells that includes the specific subscriber (Column 1, Lines 35-42); (c) forming a beam that corresponds to an area of one of the cell clusters (Figure 9); and (d) scanning the beam to the one of the cell clusters that includes the specific subscriber (Column 1, Lines 62-67).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2 is rejected under 35 USC 103(a) as being unpatentable over Chang et al. and further in view of Diekelman et al. (U.S. Patent No. 5,555,444).

Referring to claim 2, Chang et al. teaches the limitations of claim 2 and teach partitioning, but do not teach using a traffic model. Diekelman et al. teaches using a traffic model (Column 18, Lines 15-26). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Chang et al. with the art of Diekelman et al. for predicting traffic and handling different traffic prediction requests (Column 19, Lines 32-38).

4. Claims 3 - 7 are rejected under 35 USC 103(a) as being unpatentable over Chang et al. (U.S. Patent No. 6,388,615) and further in view of Houston et al. (U.S. Patent No. 6,272,317).

Referring to claims 3, and 5 - 7 Chang et al. teaches the limitations of claim 2 and teach partitioning, but do not teach after step (d) the step of (e) partitioning the cell cluster that includes the specific subscriber into a plurality of cell clusters, (f) zooming the beam to form a beam that corresponds to an area of one of the plurality of cell clusters and then repeat steps (d), (e), and (f). It would be obvious to repeat the process of claim 1 if the location of the subscriber needs to be more precise by (e) partitioning the cell cluster that includes the specific subscriber into a plurality of cell clusters, (f) zooming the beam to form a beam that corresponds to an area of one of the plurality of cell clusters and then repeat steps (d), (e), and (f) to determine the cell or precise location of the subscriber.

Referring to claim 4, Chang et al. further teaches wherein each of the plurality of cell clusters has an equal number of cells (Figure 1).

Referring to claim 6, Chang et al. further teaches combining beams corresponding to an area of at least one of the plurality of cells to form the beam (Column 7, Lines 19-32).

5. Claims 8 and 10 are rejected under 35 USC 103(a) as being unpatentable over Chang et al. and further in view of Lo et al. (U.S. Patent No. 6,240,072).

Referring to claim 8, Chang et al teaches an apparatus for rapid acquisition of a specific subscriber comprising: a stratospheric transponder platform having an antenna for one of transmitting a beam corresponding to an area of a cell cluster within a partition containing a plurality of cell clusters (Column 1, Lines 35-42) and scanning the beam to form a beam aimed at one of the plurality of cell clusters that includes a specific subscriber wherein each of the plurality of cell clusters includes at least one of a plurality of cells (Column 1, Lines 62-67) and also teaches zooming the beam (Column 1, Line 65), but does not teach using a ground station coupled to the stratospheric transponder platform wherein the ground station comprises a beamformer to form a beam. Lo et al teaches using a ground station coupled to the stratospheric transponder platform wherein the ground station comprises a beamformer to form a beam ((Column 3, Lines 19-29). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Chang et al. with the art of Lo et al of using a ground station coupled to the stratospheric transponder platform wherein the ground station comprises a beamformer to form a beam to reduce satellite load and to provide more flexibility (Column 3, Lines 23 -26).

Referring to claim 10, Chang et al. further teaches wherein each of the plurality of cell clusters has an equal number of cells (Figure 1).

Referring to claim 11, Chang et al. further teaches wherein the beamformer zooms the beam by combining beams corresponding to an area of at least one of the plurality of cells (Column 7, Lines 19-32).

Application/Control Number: 09/652,862  
Art Unit: 2684

6. Claim 9 is rejected under 35 USC 103(a) as being unpatentable over Chang et al. in view of Lo et al. and further in view of Diekelman et al.

Referring to claim 9, the Chang et al. and Lo et al combination teach the limitations of claim 9 and teach partitioning, but do not teach using a traffic model. Diekelman et al. teaches using a traffic model (Column 18, Lines 15-26). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the combined art of Chang et al. and Lo et al with the art of Diekelman et al. for predicting traffic and handling different traffic prediction requests (Column 19, Lines 32-38).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bains et al U.S. Patent No. 6,429,823 discloses horn reflect array.

Blanchard et al. U.S. Patent No. 6,072,986 discloses method of identifying antenna beams for transmission of ring alert messages.

Houston et al. U.S. Patent No. 6,272,317 discloses method and system for providing satellite coverage using fixed spot beams and scanned spot beams.

Kallin et al. U.S. Patent No. 6,058,308 discloses apparatus and associated method for adaptively selecting a paging area in which to page a mobile terminal.

Luh U.S. Patent No. 6,414,646 discloses variable beamwidth and zoom contour beam antenna systems.

Application/Control Number: 09/652,862  
Art Unit: 2684

Norin et al. U.S. Patent No. 6,456,846 discloses non-uniform multi-beam satellite communications method.

Ramanujam et al. U.S. Patent No. 6,366,256 discloses multi-beam reflector antenna systems with a simple beamforming network.

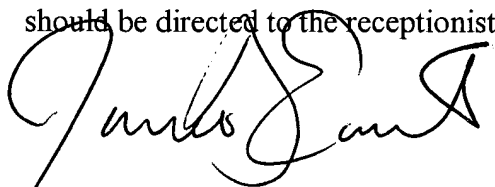
Schiff U.S. Patent No. 6,424,831 discloses apparatus and method for paging a user terminal in a satellite communication system.

Thompson U.S. Patent No. 4,799,065 discloses reconfigurable beam antenna.

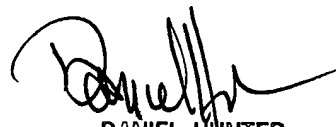
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (703) 305-4826. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thanh Le can be reached on ((703)305-4819. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-9508 for regular communications and (703)305-9508 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.



Ewart  
November 22, 2002



DANIEL HUNTER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600